DOCUMENT RESUME

ED 415 743 HE 030 887

AUTHOR	Osterlind, Steven J.
TITLE	A National Review of Scholastic Achievement in General Education. How Are We Doing and Why Should We Care? ERIC Digest.
INSTITUTION	ERIC Clearinghouse on Higher Education, Washington, DC.; George Washington Univ., Washington, DC. Graduate School of Education and Human Development.
SPONS AGENCY	Office of Educational Research and Improvement (ED), Washington, DC.
REPORT NO	EDO-HE-97-8
PUB DATE	1997-00-00
NOTE	4p.; For the full report, see HE 030 888.
CONTRACT	RR93002008
AVAILABLE FROM	ERIC Clearinghouse on Higher Education, One Dupont Circle, NW, Suite 630, Washington, DC 20036-1183; phone: 800-773-3742, fax: 202-452-1844.
PUB TYPE	ERIC Publications (071) -- ERIC Digests in Full Text (073)
EDRS PRICE	MF01/PC01 Plus Postage.
DESCRIPTORS	*Academic Achievement; Achievement Tests; Asian Americans; Black Students; College Students; Criterion Referenced Tests; English; Ethnic Groups; *General Education; Higher Education; Hispanic Americans; Mathematics; Racial Differences; Sciences; Sex Differences; Social Studies; White Students
IDENTIFIERS	*College Basic Academic Subjects Examination; ERIC Digests

ABSTRACT

This digest summarizes what is known about scholastic achievement in general education at the college level, and is based on a study using the College Basic Academic Subjects Examination (College BASE), a criterion-referenced achievement test of general education skills and competencies. College BASE assesses achievement in four subject areas: English, mathematics, science, and social studies and has been used by 56 colleges and universities; scores are available for 74,535 students tested between 1988 and 1993. The measure also collects data on four subpopulation categorical variables: sex, ethnic heritage, class standing, and age. Findings indicate that the sexes differ in achievement, with females outperforming males in English and males outperforming females in mathematics, science, and social studies. Differences within ethnic groups include an enormous disparity between Asian achievement in mathematics and in the three other subjects, especially English. Within the Hispanic population, social studies scores are significantly stronger than scores in other areas. Differences among racial groups are most pronounced. In mathematics, Asian students outperformed all other students, whereas Caucasians' achievement was greater than all other groups in English, science, and social studies. Blacks/African Americans lagged far behind the achievement of all other ethnic groups in every area assessed. (DB)

1997
EDO-HE-97-8

ERIC®

DIGEST

ED 415 743

A National Review of Scholastic Achievement in General Education

How Are We Doing and Why Should We Care?

Steven J. Osterlind

BEST COPY AVAILABLE

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION
CENTER (ERIC)
☐ This document has been reproduced as received from the person or organization originating it.
☐ Minor changes have been made to improve reproduction quality.
• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

HE030044

ERIC® Clearinghouse on Higher Education
▪
Institute for Education Policy Studies
▪
Graduate School of Education and Human Development

The George Washington University
WASHINGTON DC

One Dupont Circle
Suite 630
Washington, DC
20036-1183

visit our web site at
www.gwu.edu/~eriche

1997
EDO-HE-97-8

ERIC®

DIGEST

ERIC® Clearinghouse on Higher Education
▪
Institute for Education Policy Studies
▪
Graduate School of Education and Human Development

The George Washington University
WASHINGTON DC

One Dupont Circle
Suite 630
Washington, DC
20036-1183

visit our web site at
www.gwu.edu/~eriche

A National Review of Scholastic Achievement in General Education

How Are We Doing and Why Should We Care?

Steven J. Osterlind

What Do We Really Know about Collegians' Scholastic Achievement?

Historically, the American public has accepted at face value the claims made by colleges and universities about the quality of postsecondary education (Pascarella and Terenzini 1991). Inquiry int their academic performance was unnecessary because scholastic rigor and excellence were tautologous. Recently, however, our conceptions of the postsecondary experience are changing, incorporating a more cynical and critical perspective. In consequence, a large number of colleges an universities have instituted assessment programs aimed at their core courses, their general educatio curricula, or their liberal studies programs.

Despite widespread use of outcomes assessment in American higher education, surprisingly little information is publicly available about what college students know and what skills they possess. The College Basic Academic Subjects Examination (College BASE), a first attempt to record nationally th achievement in general education for our college-level population, addresses this dearth of informatio about what collegians know and can do.

What Is College BASE, and Who Was Tested?

College BASE is a criterion-referenced achievement test focusing on the degree to which students have mastered particular skills and competencies consistent with the completion of general education coursework (Osterlind and Merz 1990). Used by 56 colleges and universities, it includes scores for 74,535 students tested between 1988 and 1993. This very large population of examinees makes College BASE perhaps the largest study of its kind ever. The sample of institutions and of students tested within any given campus was not random, but by convenience. Still, by size alone, this study represents a considerable number of students and institutions. Unlike other commercially available measures of general education outcomes, College BASE is, in fact, the only test for college-level audiences to meet the technical criteria for being "criterion-referenced." While approximately two-thirds of the items in College BASE assess high-level, cognitive reasoning skills, the remaining one-third of the items assess important, factual knowledge (Osterlind and Merz 1990).

College BASE assesses achievement in four subject areas: English, mathematics, science, and social studies. Subject-area scores are built on content "clusters," which in turn are based on "skills." For example, English scores are based on two content clusters: reading and literature, and writing. Mathematics scores are based on three clusters: general mathematics, algebra, and geometry. (Calculus is not included as another cluster, because it is not typically a part of a university's general education curriculum.) Cluster scores derive from the particular skills inherent to a given subject. For example, the cluster reading and literature comprises the skills of reading critically, reading analytically, and understanding literature. In total, the exam includes four subjects, nine clusters, and 23 skills.

In addition to examining test scores for the population of students generally, data were also analyzed by subpopulation along four categorical variables: sex, ethnic heritage, class standing, and age. Each variable has distinct features that divide it into meaningful units.

What Do Collegians Really Know about General Education Subjects?

The findings of the study suggest that wide differences exist in collegians' achievement in general education and that dissimilitude in achievement is especially pronounced for particular subpopulations especially by race. Two main findings emerge from the first level of data interpretation, simple mean scores for the four subjects. First, scores in three of the four subject areas (mathematics, science, an social studies) are very close to each other and may be interpreted to mean that collegians' global level of achievement among these areas is about relatively equal. English, however, falls behind the other areas by several points, representing a truly significant difference.

BEST COPY AVAILABLE

Throughout all of the area tests, and regardless of whether one looks at data from the gross subject level or at the more detailed cluster and skill levels, the sexes differ in achievement. In English, for example, the data clearly show that females far outperform males. In the three other subjects, however--mathematics, science, and social studies--males evidently demonstrate superior knowledge over females. And this trend seems to carry forward into analysis by cluster and skill level.

Interethnic differences are not consistent. For example, enormous disparity exists within the Asian population between achievement in mathematics and achievement in the three other subjects, especially when contrasted to English. Within the Hispanic subpopulation, social studies scores are significantly stronger than scores in the other areas. Achievement across subjects is more uniform for Caucasians than it is for any other ethnic heritage classification, and it is most dissimilar for Asians/Pacific Islanders.

Most alarming, however, are the findings between and among the race groupings. In this area, differences are profound and pronounced. In mathematics, Asian students outperform all other groups, whereas Caucasians' achievement outstrips all other groups in English, science, and social studies. Blacks/African Americans lag far behind the achievement of all other ethnic heritage groups in every area assessed. In some cases, the gap between Blacks'/African Americans' achievement and the other groups' is so wide it is more than just alarming. It is frightening.

What Are the Implications of College BASE? What Further Research Is Called For?

The implications of the findings from this study are many and varied, and include the necessity for special programs for low-achieving students and more opportunities to extend the collegiate experience for high achievers. Mostly, however, the findings show the vast differences within the population of college students. The full report contains considerable discussion about the significance and implications of the study's findings.

At this point in our history of higher education, it would be worthwhile to systematically sample the achievement of students who are pursuing formal postsecondary education in a nationally based research project. These findings and their interpretations show that achievement in general education among collegians is a complex and intriguing arena for exploration. Findings and conclusions are at once disturbing and enlightening. But at least by a national look at the achievement of college-level students in general education, we begin to gain insight into evaluating the quality and effectiveness of American higher education.

Selected References

Osterlind, S.J., et al. 1990. "College Basic Academic Subjects Examination, Form LE." Chicago: Riverside.

Osterlind, S.J., and W.R. Merz. 1990. Technical Manual for College Basic Academic Subjects Examination. Chicago: Riverside.

Pascarella, E.T., and P.T. Terenzini. 1991.How College Affects Students: Findings and Insights from Twenty Years of Research. San Francisco: Jossey-Bass.

Pike, G.R. 1992. "The Components of Construct Validity: A Comparison of Two Measures of General Education Outcomes." Journal of General Education 41: 130-160.

Project on Strong Foundations for General Education. 1994. Strong Foundations: Twelve Principles for Effective General Education Programs. Washington, D.C.: Association of American Colleges. ED 367 250. 90 pp. MF-01; PC not available EDRS.

Wingspread Group on Higher Education. 1993. An American Imperative: Higher Expectations for Higher Education. An Open Letter to Those Concerned about the American Future. Johnson Foundation. ISBN 0-9639160-0-9.

ERIC®

This ERIC digest is based on a full-length report in the ASHE-ERIC Higher Education Report series

25-8

A National Review of Scholastic Achievement in General Education: How Are We Doing and Why Should We Care by Steven J. Osterlind

■

This report was prepared by the ERIC Clearinghouse on Higher Education in cooperation with the Association for the Study of Higher Education and published by the Graduate School of Education and Human Development at the George Washington University. Each report is a definitive review of the literature and institutional practice on a single critical issue. Many administrators subscribe to the series and circulate reports to staff and faculty committees with responsibility in a report's topic area.

■

The eight issue series is available through subscription for $120.00 per year ($140.00 outside the U.S.). Subscriptions begin with Report 1 and conclude with Report 8 of the current series year. Single copies, at $24.00 each, can be ordered by writing to: ASHE-ERIC Higher Education Reports, The George Washington University, One Dupont Circle, Suite 630, Washington, DC 20036-1183, or by calling (800) 773-3742. Call for a copy of the ASHE-ERIC Higher Education Reports Catalog.

■

This publication was partially prepared with funding from the Office of Educational Research and Improvement, U.S. Department of Education, under contract no. RR-93-002008. The opinions expressed here do not necessarily reflect the positions or policies of OERI or the department.

The George Washington University
WASHINGTON DC

Web Site: www.gwu.edu/~eriche